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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,894	01/26/2001	Ronald Dean Parrish	BLD920000045US1	7753

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EXAMINER
PHAM, THIERRY L

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/770,894	PARRISH ET AL.
	Examiner	**Art Unit**
	Thierry L Pham	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) *7-9,17-19 and 27-29* is/are allowed.
6)☒ Claim(s) *1-6,10-16,20-26 and 30* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>2</u>.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1-4, 6, 10-14, 16, 20-24, 26, 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Konishi (U.S. 20040012807), and in view of Suzuki (U.S. 6549947).

Regarding claim 11, Konishi discloses a system for interfacing with a printer driver (fig.

1), comprising:

(1) means for receiving (communication interface, fig. 1 and fig. 3) data transmitted from the

printer driver;

(2) means for receiving (communication interface, fig. 1 and fig. 3) an acknowledgment request

(reply issuance request from the printer driver, fig. 1 and fig. 14) from the printer driver, wherein

the printer driver does not send further data to print until receiving an acknowledgment reply

indicating that the transmitted data passed an initial check (the printer driver further transmits the

print data to the printer if the returned request is positive, p. 5, par. 89-94);

(3) means for transmitting (communication network, fig. 1) an acknowledgment reply (reply

response, fig. 3) to the printer driver in response to the acknowledgment request before

completing the initial check (check execution before returning reply information to printer

driver, p. 2, par. 14-17) of the sent data to cause the printer driver to send further data;

However, Konishi does not explicitly disclose a system interfacing with a printer driver comprising means for resynchronizing data processing operations in response to detecting an error in the received data; and means for rasterizing and outputting the data.

Suzuki, in the same field of endeavor for system interfacing with a printer driver, teaches a means for resynchronizing data processing operations in response to detecting an error in the received data (retransmitting the print data if the error occurred, fig. 12, abstract and col. 6, lines 32-48 and col. 10, lines 1-23); and means for rasterizing (bit image, col. 5, lines 40-50) and outputting (printer, col. 5, lines 40-50) the data.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Konishi as per teachings of Suzuki because of a following reason: (1) to re-transmit the print data to the printer in an event of error occurs.

Therefore, it would have been obvious to combine Konishi with Suzuki to obtain the invention as specified in claim 11.

Regarding claim 12, Suzuki further discloses the system of claim 11, wherein the received data comprises a first received data set, further comprising means for receiving a second data set (input jobs, fig. 4-5) from the printer driver after transmitting the acknowledgment reply and before completing the rasterization of the first data set.

Regarding claim 13, Suzuki further discloses the system of claim 12, wherein each received data set comprises a page of data (abstract and col. 9, lines 25-67), a portion of a page or commands to output.

Regarding claim 14, Suzuki further discloses the system of claim 12, further comprising: means for buffering (spooler, fig. 1) the second data set while the first data set is being rasterized; and means for rasterizing the buffered second data set after completing the rasterization of the first data set.

Regarding claim 16, Suzuki further discloses the system of claim 11, wherein the initial check is to verify that the data was received, accepted and syntax checked (fig. 16).

Regarding claim 20, Suzuki further discloses the system of claim 11, wherein the means for transmitting the acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data comprises an asynchronous processing mode (col. 6, lines 32-67), and wherein the means for resynchronizing (col. 10, lines 1-45) data processing operations in response to detecting the error comprises beginning a synchronous processing mode wherein the acknowledgment reply is sent to the printer driver in response to the acknowledgment request after completing the initial check of the resent data.

Regarding claims 1-4, 6, 10: Claims 1-4, 6, 10 are the method claims corresponding to the apparatus claims 11-14, 16, 20 (respectively). The method claims are included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 11-14, 16, 20 above.

Regarding claims 21-24, 26, 30 correspond to claims 11-14, 16, 20 except computer readable memory medium for storing program is claimed rather that printing system or data output apparatus. All computers have some type of computer readable memory medium for storing computer programs, hence claims 21-24, 26, 30 would be rejected using the same rationale as in claims 11-14, 16, 20.

3.   Claims 5, 15, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki and Konishi as applied to claims 1, 11, and/or 21 above, and further in view of Parker et al (U.S. 6441919).

Regarding claims 5, 15, and 25, the combinations of Suzuki and Konishi do not explicitly teach two rasterizers to rasterize in parallel the two data sets.

Parker, in the same field of endeavor for printing, teaches two rasterizers to rasterize in parallel the two data sets (parellel rasterizers, fig. 1, col. 5, lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the combinations of Suzuki and Konishi as per teachings of Parker because of a following reason: (1) to increase printing speed by processing two sets of print data using parallel rasterizers.

Therefore, it would have been obvious to combine Suzuki and Konishi with Parker to obtain the invention as specified in claims 5, 15, and 25.

Allowable Subject Matter

4.   Claims 7, 17, 27 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

For example, the limitations as recited in claim 7, wherein resynchronizing data precessing

operations in response to detecting the error further comprises: detecting an error while

processing the received data; transmitting a negative acknowledgment indicating an error that

causes the printer driver to resend previously transmitted data that did not output successfully;

and wherein after transmitting the negative acknowledgment, performing: (i) receiving data and

one acknowledgment request; (ii) performing the initial check of the received data; (iii)

determining whether the received data is resent data; and (iv) if the received data is resent data,

then transmitting an acknowledgment reply to the printer driver in response to the

acknowledgment request after completing the initial check of the resent data.
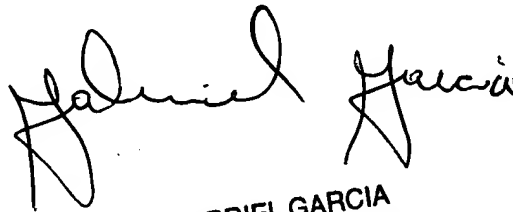
Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The

examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

GABRIEL GARCIA
PRIMARY EXAMINER